EPA Rules and Requirements for Closure of Earthen Manure Storage Structures

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Outline

- Regulations
- CAFO program
- When EPA may become involved
- What EPA involvement may be
- Examples
- Resources

Jurisdiction

- Clean Water Act
  - 40 CFR 122.23(p)(2) Duty to Maintain Permit Coverage, which reads in part, "The permittee has demonstrated to the satisfaction of the Director that there is no remaining potential for a discharge of manure, litter or associated process wastewater that was generated while the operation was a CAFO, other than agricultural stormwater from land application areas."
- Safe Drinking Water Act
- State Regulations

The archived presentation is available at:
http://www.extension.org/pages/21819/chronological-webcast-archive
Brief Overview of Program

- Federal Concentrated Animal Feeding Operations (CAFO) regulations do not specifically address the closure process of Earthen Manure Storage Structures
- Most of the states have been delegated the National Pollutant Discharge Elimination System (NPDES) CAFO program
- EPA retains oversight authority of the program
- Federal regulations do prohibit surface water and groundwater contamination and does extend to Earthen Manure Storage Structures

EPA May Get Involved When...

- EPA is the permitting authority
- State or facility request EPAs assistance/involvement
- Ongoing enforcement actions/history between a facility and EPA
- Egregious issues involved with closure

EPA Involvement May Include...

- Commenting/Approving a closure plan
- Nutrient management plan demonstrating suitable locations for lagoon contents
- Install monitoring wells for pre and post closure monitoring (Nitrogen, Phosphorus, Bacteria)
- Target residual nutrient concentrations following excavation
**Example of Costs**

- Installing 4 Monitoring Wells (1 up & 3 Down)
- Lagoon on Fractured Granite – Approx. 30 yrs old
- 2 Down Gradient MW’s elevated NH4 and bacteria
- Leaking Surface and Subsurface
- Approx. 140 ac-ft material removed
- Approx. 350 truck loads handled multiple times
- + $ 2M

**Pre Nutrient Concentrations**

- 2009 Effluent Analysis
  - 240 ppm N
  - 35 ppm P
- 2011 Effluent Analysis
  - 63 ppm N
  - 8 ppm P
- 2011 Solid Analysis
  - 2910 ppm N
  - 2550 ppm P

**Post Nutrient Concentrations**

- 2011 Following Initial Solids/liner Removal
  - 600 ppm NH4
  - 452 ppm P
- 2011 Following Additional Soil Removal
  - 3 ppm NH4
  - 3 ppm P

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Resources

- EPA Website
  - [www.epa.gov](http://www.epa.gov)
- Clean Water Act
  - [http://www.epa.gov/lawsregs/laws/cwa.html](http://www.epa.gov/lawsregs/laws/cwa.html)
- EPA CAFO Regulations
  - [http://cfpub.epa.gov/npdes/home.cfm?program_id=7](http://cfpub.epa.gov/npdes/home.cfm?program_id=7)
- Safe Drinking Water Act
  - [http://water.epa.gov/lawsregs/rulesregs/sdwa/](http://water.epa.gov/lawsregs/rulesregs/sdwa/)

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